

only a few feet apart, so it appears that in the Bolinas area, at least, the feeding habits of the two are quite similar.

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Deep Water Collecting off Guaymas, Mexico

by

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During December of 1959, while vacationing in Guaymas, Mexico, I had the privilege of spending two days aboard the General Yañez, a 65-foot shrimp trawler. During this time we used the boat exclusively to trawl for shells in water ranging in depth from 18-55 fathoms. The trawling was done in the vicinity of Cabo Haro, which is just west of the entrance to Guaymas Bay.

The trip was made possible through the generosity of Captain Xavier Mendoza of Productos Marinos de Guaymas. Besides Captain Mendoza and the author, others in the collecting party included Dr. Bruce Campbell and Todd Schowalter, also of the Conchological Club of Southern California, and Ivan Thompson of Brawley, California.

Many of the specimens are as yet unidentified, and there may be several new species to describe; however, a partial listing of those already identified will be of interest to those working in the Panamic area.

PELECYPODA

- Noetia delgada (Lowe, 1935)
Ostrea megodon Hanley, 1846
Pecten sericeus Hinds, 1845
Miltha xantusi (Dall, 1905), valves only
Echinochama californica Dall, 1903, valves only
Trachycardium belcheri (Broderip & Sowerby, 1829)
Lophocardium annettae (Dall, 1889)
Nemocardium pazianum (Dall, 1916)

GASTROPODA

- Turcica coffea Gabb, 1865, single specimen represented by apical fragment
Architectonica placentalis (Hinds, 1844)
Xenophora robusta Verrill, 1870
Natica colima Strong & Hertlein, 1937
Cymatium amictum (Reeve, 1844)
Distorsio constrictus (Broderip, 1833)
Distorsio decussatus (Valenciennes, 1832)
Maxwellia humilis (Broderip, 1833) (?)
Pterynotus inezana (Durham, 1950)
Pterynotus swansonii Hertlein & Strong, 1951, dead specimens only
Typhis coronatus Broderip, 1833
Coralliophila hindsii (Carpenter, 1857)
Strombina subangularis Lowe, 1935
Cantharus shaskyi Berry, 1959
Cantharus mendozana (Berry, 1959), dead specimen only
Metula amosi Vanatta, 1913
Cancellaria clavatula Sowerby, 1832
Trigonostoma bullatum (Sowerby, 1832)
Trigonostoma funiculatum (Hinds, 1843)
Gemmula hindsiana Berry, 1958
Ancistrosyrinx cedonulli (Reeve, 1843)
Knefastia tuberculifera (Broderip & Sowerby, 1829)
Clavus roseolus (Hertlein & Strong, 1955)
Tenaturris verdensis (Dall, 1919)
Turricula armilda (Dall, 1908)

We were particularly happy to get four specimens of Pterynotus inezana. Perhaps it will now be possible to work out its rela-

tionship to Pterynotus pinniger.

The finding of the apical fragment of Turcica caffa further establishes this species as a resident in the Gulf of California. I now have also four intact specimens of this species reportedly taken between Guaymas and Tastiota, 80 miles to the north. Two of these are with operculum.

An incident not related to the above trawling occurred while we were in Guaymas. Early one morning Todd Schowalter and I were looking over some of the shrimp boats that had docked during the night. On one of the boats, the nets still suspended from the rigging and still dripping water — evidence

that the boat had worked off Guaymas the previous night (none of the crew was around) — I found on the deck at the bottom of the suspended nets a good (but dead) specimen of Cancellaria cooperi Gabb, 1865. Although this is only circumstantial evidence of the occurrence of this species within the Gulf of California, we must be on the alert for more specimens of this.

Considerable work needs to be done on many of the species collected, especially the turrids. When this is completed, a check list of all the species will be published along with specific data, range extensions, etc.

Fluctuations in Mollusk Populations after a Red Tide in the Estero de Punta Banda, Lower California, Mexico

by
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(Plate 4)

In an earlier issue of this journal it was reported (Stohler, 1959) that during the Red Tide of 1958 in the Estero de Punta Banda in Baja California, Mexico, a collection of mollusks was made. It was noted at that time that a great number of the individuals observed were dead, some of them relatively recently, while others had attained a more advanced state of decomposition. On a map accompanying that report (map C on Plate 6, loc. cit.) two areas were distinguished and designated I (inner portion) and O (outer portion) respectively. In that report it did not seem necessary to stress the fact that the inner portion was separated from the outer one by a relatively massive sand bar which seems to be covered by a thin layer of water only during very high tides. Nor did it seem important at that time to speculate on the possible significance of this sand bar in its effect upon the changing of the water in the inner portion. However, in the light of the present progress report it appears now desirable to consider this possible effect. It seems obvious that the inner portion would be isolated from the open ocean by the bar for a considerable portion of the time, at least during that part of the year when the high and low

waters differ but little from each other. The conclusion that the inner portion would be subject to conditions which might be called "stagnant" seems inevitable. This "stagnant" condition might be assumed to cause more thorough contamination of the invertebrates living in the inner portion if such contaminating conditions do occur and somehow enter this area — as they did, in fact, enter in 1958. This conclusion seems to receive support from the observations made on June 15, 1958: death and decomposition were more pronounced in the inner portion. It was here where the Sipunculus nudus were observed as reported (Stohler, loc. cit., p. 33).

Bearing this fact in mind, it appears permissible to project that the total population in the inner portion would suffer more severely than that in the outer portion; additionally it seems logical to assume that a recovery to normal conditions would progress more rapidly in the outer portion than in the inner one.

During the month of July, 1959, it was possible for me to revisit the Estero de Punta Banda, again in company of Mr. and Mrs. Alan H. Wolfson of San Diego. Because of the importance attaching to thorough collect-